

AMENDMENTS TO THE CLAIMS:

The claims have not been amended in this response. The current status of the claims is as follows:

1 1. (Previously Amended) A method of configuring a first network device for connection to a
2 communications network subnet having a second network device, the method comprising:

C| 3 determining, with a configuration determination module of the first network device,
4 configuration attributes for operably connecting the first network device to the subnet based on
5 configuration information for the subnet detected by the first network device; and

6 configuring the first network device, with an autoconfiguration module of the first
7 network device, according to the configuration attributes so that the first network device is operably
8 connected to the subnet.

1 2. (Original) A method according to claim 1, wherein configuring the first network device is
2 performed automatically by the autoconfiguration module.

1 3. (Original) A method according to claim 1, wherein configuring the first network device is
2 performed as a guided process in which the autoconfiguration module interacts with a user and
3 presents to the user suggested configuration choices based on the configuration attributes.

1 4. (Original) A method according to claim 3, wherein the suggested configuration choices are
2 accompanied by an explanation to the user as to why the configuration choices have been suggested.

1 5. (Previously Amended) A method according to claim 1, wherein the configuration attributes
C 2 comprise an Internet Protocol (IP) subnet mask determined based upon the configuration information
3 unique to the subnet and derived from passively listening to router control traffic detected by the first
4 network device at interfaces between the first network device and the subnet.

1 6. (Original) A method according to claim 1, wherein the configuration attributes comprise at
2 least one of Dynamic Host Configuration Protocol (DHCP) forwarding data and DHCP server
3 address.

1 7. (Previously Amended) A method according to claim 1, wherein the configuration attributes
2 comprise virtual local area network (VLAN) information including tag identifications, types,
3 protocols, addresses, and port-to-VLAN mappings.

1 8. (Original) A method according to claim 1, wherein the configuration attributes comprise at
2 least one of Spanning Tree Group information, Simple Network Management Protocol (SNMP)
3 server addresses, Open Shortest Path First (OSPF) timer information, Routing Information Protocol
4 (RIP) broadcast timer information, and Virtual Router Redundancy Protocol (VRRP) information.

1 9. (Previously Amended) A method according to claim 1, wherein the step of determining
2 configuration attributes further comprises communicating with a network centralized configuration
3 server.

1 10. (Original) A method according to claim 9, wherein the network centralized configuration
2 server uses Simple Network Management Protocol (SNMP) to communicate.

1 11. (Previously Amended) A method according to claim 9, wherein the step of communicating
2 with a network centralized configuration server comprises:

3 sending to the centralized configuration server a message containing the addresses of network
4 neighbors on the subnet;

U 5 searching in a configuration database of the centralized configuration server for configuration
6 attributes relevant to the first network device; and

7 forwarding the configuration attributes from the configuration database to the first network
8 device.

1 12. (Previously Amended) A method according to claim 1, wherein the step of determining
2 configuration attributes further comprises communicating with the second network device.

1 13. (Previously Amended) A method according to claim 12, wherein the step of communicating
2 with the second network device uses a protocol based on Internet Control Message Protocol (ICMP)
3 or User Datagram Protocol (UDP).

1 14. (Previously Amended) A method according to claim 1, wherein the step of determining
2 configuration attributes comprises analyzing routing protocol control packets detected by the first
3 network device.

1 15. (Previously Amended) An autoconfiguring data router connected to a communications
2 network subnet having a second network data router, the autoconfiguring data router comprising:
3 a configuration determination module that determines configuration attributes for operably
4 connecting the autoconfiguring data router to the subnet based on configuration information for the
5 subnet detected by the autoconfiguring data router; and
C 6 an autoconfiguration module that configures the autoconfiguring data router according to the
7 configuration attributes so that the autoconfiguring data router is operably connected to the subnet.

1 16. (Original) An autoconfiguring data router according to claim 15, wherein the
2 autoconfiguration module configures the autoconfiguring data router automatically.

1 17. (Original) An autoconfiguring data router according to claim 15 wherein the
2 autoconfiguration module configures the autoconfiguring data router using a guided process in which
3 the autoconfiguration module interacts with a user and presents to the user suggested configuration
4 choices based on the configuration attributes.

1 18. (Original) An autoconfiguring data router according to claim 17, wherein the
2 autoconfiguration module accompanies the suggested configuration choices with an explanation to
3 the user as to why the configuration choices have been suggested.

1 19. (Previously Amended) An autoconfiguring data router according to claim 15, wherein the
2 network attributes comprise an Internet Protocol (IP) subnet mask determined based upon the
3 configuration information unique to the subnet and derived from passively listening to router control
4 traffic detected by the autoconfiguring data router at interfaces between the first network device and
5 the autoconfiguring data router.

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1 20. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 21. (Previously Amended) An autoconfiguring data router according to claim 15, wherein the
2 configuration attributes comprise virtual local area network (VLAN) information including tag
3 identifications, types, protocols, addresses, and port-to-VLAN mappings.

1 22. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
4 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
5 (VRRP) information.

1 23. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module communicates with a network centralized configuration server to determine
3 the configuration attributes.

1 24. (Original) An autoconfiguring data router according to claim 23, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate with the configuration determination module.

1 25. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module receives relevant configuration attributes from the centralized configuration
3 server .

1 26. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module communicates with a second network data router to determine the
3 configuration attributes.

1 27. (Original) An autoconfiguring data router according to claim 26, wherein the configuration
2 determination module uses a protocol based on Internet Control Message Protocol (ICMP) or User
3 Datagram Protocol (UDP) to communicate with the second network data router.

1 28. (Original) An autoconfiguring data router according to claim 15, wherein the configuration
2 determination module analyzes routing protocol control packets detected by the autoconfiguring data
3 router to determine the configuration attributes.

C 1 29. (Previously Amended) A computer network having at least one subnetwork, the at least one
2 subnetwork having a plurality of data routers that communicate data packets over the network, the
3 subnetwork including at least one autoconfiguring data router, the at least one autoconfiguring data
4 router comprising:

5 a configuration determination module that determines configuration attributes for operably
6 connecting the autoconfiguring data router to the subnet based on configuration information for the
7 subnet detected by the autoconfiguring data router; and

8 an autoconfiguration module that configures the autoconfiguring data router according to the
9 configuration attributes so that the autoconfiguring data router is operably connected to the subnet.

1 30. (Original) A computer network according to claim 29, wherein the autoconfiguration module
2 configures the autoconfiguring data router automatically.

1 31. (Original) A computer network according to claim 29, wherein the autoconfiguration module
2 configures the autoconfiguring data router using a guided process in which the autoconfiguration
3 module interacts with a user and presents to the user suggested configuration choices based on the
4 configuration attributes.

Q 1 32. (Original) A computer network according to claim 31, wherein the autoconfiguration module
2 accompanies the suggested configuration choices with an explanation to the user as to why the
3 configuration choices have been suggested.

1 33. (Previously Amended) A computer network according to claim 29, wherein the network
2 attributes comprise an Internet Protocol (IP) subnet mask determined based upon the configuration
3 information unique to the subnet and derived from passively listening to router control traffic
4 detected by the first network device at interfaces between the first network device and the subnet.

1 34. (Original) A computer network according to claim 29, wherein the configuration attributes
2 comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data and DHCP
3 server address.

1 35. (Previously Amended) A computer network according to claim 29, wherein the configuration
2 attributes comprise virtual local area network (VLAN) information including tag identifications,
3 types, protocols, addresses, and port-to-VLAN mappings.

C 1 36. (Original) A computer network according to claim 29, wherein the configuration attributes
2 comprise at least one of Spanning Tree Group information, Simple Network Management Protocol
3 (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing Information
4 Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol (VRRP)
5 information.

1 37. (Original) A computer network according to claim 29, wherein the configuration
2 determination module communicates with a network centralized configuration server to determine
3 the configuration attributes.

1 38. (Original) A computer network according to claim 37, wherein the network centralized
2 configuration server uses Simple Network Management Protocol (SNMP) to communicate with the
3 configuration determination module.

1 39. (Original) A computer network according to claim 37, wherein the configuration
2 determination module receives relevant configuration attributes from the centralized configuration
3 server .

1 40. (Original) A computer network according to claim 29, wherein the configuration
2 determination module communicates with a second network data router to determine the
C) 3 configuration attributes.

1 41. (Original) A computer network according to claim 40, wherein the configuration
2 determination module uses a protocol based on Internet Control Message Protocol (ICMP) or User
3 Datagram Protocol (UDP) to communicate with the second network data router.

1 42. (Original) A computer network according to claim 29, wherein the configuration
2 determination module analyzes routing protocol control packets detected by the autoconfiguring data
3 router to determine the configuration attributes.

1 43. (Previously Amended) A computer program product for use on a computer system for
2 configuring a first network device for connection to a communications network subnet having a
3 second network device, the computer program product comprising a computer-usable medium
4 having computer-readable program code thereon, the computer readable program code including:

5 program code for determining configuration attributes for operably connecting the first
c/ 6 network device to the subnet based on configuration information for the subnet detected by the first
7 network device; and

8 program code for configuring the first network device according to the configuration
9 attributes so that the first network device is operably connected to the subnet.

1 44. (Original) A computer program product according to claim 43, wherein configuring the first
2 network device is performed automatically by the autoconfiguration module.

1 45. (Original) A computer program product according to claim 43, wherein configuring the first
2 network device is performed as a guided process in which the autoconfiguration module interacts
3 with a user and presents to the user suggested configuration choices based on the configuration
4 attributes.

1 46. (Original) A computer program product according to claim 45, wherein the suggested
2 configuration choices are accompanied by an explanation to the user as to why the configuration
3 choices have been suggested.

1 47. (Previously Amended) A computer program product according to claim 43, wherein the
2 configuration attributes comprise an Internet Protocol (IP) subnet mask determined based upon the
c 3 configuration information unique to the subnet and derived from passively listening to router control
4 traffic detected by the first network device at interfaces between the first network device and the
5 subnet.

1 48. (Original) A computer program product according to claim 43, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 49. (Previously Amended) A computer program product according to claim 43, wherein the
2 configuration attributes comprise virtual local area network (VLAN) information including tag
3 identifications, types, protocols, addresses, and port-to-VLAN mappings.

C/ 1 50. (Original) A computer program product according to claim 43, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
4 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
5 (VRRP) information.

1 51. (Original) A computer program product according to claim 43, wherein the program code
2 for determining configuration attributes further comprises program code for communicating with a
3 network centralized configuration server.

1 52. (Original) A computer program product according to claim 51, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate.

1 53. (Original) A computer program product according to claim 51, wherein the program code
2 for communicating with a network centralized configuration server comprises:

3 program code for sending to the centralized configuration server a message containing the
4 addresses of network neighbors on the subnet;

5 program code for searching in a configuration database of the centralized configuration server
6 for configuration attributes relevant to the first network device; and

7 program code for forwarding the configuration attributes from the configuration database to
8 the first network device.

1 54. (Original) A computer program product according to claim 43, wherein the program code
2 for determining configuration attributes further comprises program code for communicating with the
3 second network device.

1 55. (Original) A computer program product according to claim 54, wherein the program code
2 for communicating with the second network device uses a protocol based on Internet Control
3 Message Protocol (ICMP) or User Datagram Protocol (UDP).

1 56. (Original) A computer program product according to claim 43, wherein the program code
2 for determining configuration attributes comprises program code for analyzing routing protocol
3 control packets detected by the first network device.

1 57. (Previously Amended) An autoconfiguring data router connected to a communications
2 network subnet having a second network data router, the autoconfiguring data router comprising:
C) 3 means for determining configuration attributes for operably connecting the autoconfiguring
4 data router to the subnet based on configuration information for the subnet detected by the
5 autoconfiguring data router; and
6 means for configuring the autoconfiguring data router according to the configuration
7 attributes so that the autoconfiguring data router is operably connected to the subnet.

1 58. (Original) An autoconfiguring data router according to claim 57, wherein the means for
2 configuring the autoconfiguring data router operates automatically.

1 59. (Original) An autoconfiguring data router according to claim 57, wherein the means for
2 configuring the autoconfiguring data router uses a guided process in which the means for
3 configuring interacts with a user and presents to the user suggested configuration choices based on
4 the configuration attributes.

1 60. (Original) An autoconfiguring data router according to claim 59, wherein the suggested
2 configuration choices are accompanied by an explanation to the user as to why the configuration
3 choices have been suggested.

1 61. (Previously Amended) An autoconfiguring data router according to claim 57, wherein the
2 configuration attributes comprise an Internet Protocol (IP) subnet mask determined based upon the
3 configuration information unique to the subnet and derived from passively listening to router control
4 traffic detected by the first network device at interfaces between the first network device and the
5 subnet.

1 62. (Original) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise at least one of Dynamic Host Configuration Protocol (DHCP) forwarding data
3 and DHCP server address.

1 63. (Previously Amended) An autoconfiguring data router according to claim 57, wherein the
2 configuration attributes comprise virtual local area network (VLAN) information including tag
3 identifications, types, protocols, addresses, and port-to-VLAN mappings.

1 64. (Original) An autoconfiguring data router according to claim 57, wherein the configuration
2 attributes comprise at least one of Spanning Tree Group information, Simple Network Management
3 Protocol (SNMP) server addresses, Open Shortest Path First (OSPF) timer information, Routing
4 Information Protocol (RIP) broadcast timer information, and Virtual Router Redundancy Protocol
5 (VRRP) information.

1 65. (Original) An autoconfiguring data router according to claim 57, wherein the means for
2 determining configuration attributes further comprises means for communicating with a network
3 centralized configuration server.

1 66. (Original) An autoconfiguring data router according to claim 65, wherein the network
2 centralized configuration server uses Simple Network Management Protocol (SNMP) to
3 communicate with the means for communicating.

1 67. (Original) An autoconfiguring data router according to claim 65, wherein the means for
2 communicating with a network centralized configuration server comprises:

3 means for sending to the centralized configuration server a message containing the addresses
4 of network neighbors on the subnet;

c/ 5 means for searching in a configuration database of the centralized configuration server for
6 configuration attributes relevant to the autoconfiguring data router; and

7 means for forwarding the configuration attributes from the configuration database to the
8 autoconfiguring data router.

1 68. (Original) An autoconfiguring data router according to claim 57, wherein the means for
2 determining configuration attributes further comprises means for communicating with the second
3 network data router.

1 69. (Original) An autoconfiguring data router according to claim 68, wherein the means for
2 communicating with the second network data router uses a protocol based on Internet Control
3 Message Protocol (ICMP) or User Datagram Protocol (UDP).

1 70. (Original) An autoconfiguring data router according to claim 57, wherein the means for
C| 2 determining configuration attributes further comprises means for analyzing routing protocol control
3 packets detected by the autoconfiguring data router.
